

REMARKS

By the above amendment, claims 1 - 8 and 8 have been cancelled and new claims 9 - 11 have been presented. New independent claims 9 and 10 more particularly recite the structural features as illustrated in Figs. 1, 6, 8 and 10 of the drawings, while further defining operational features as illustrated in other figures and described in the specification of this application which obtains the advantages as described in the specification. Applicants submit that the recited features are not disclosed or taught in the cited art as will become clear from the following discussion.

As to the rejection of claims 1 - 3 and 8 under 35 USC 112, second paragraph as being indefinite, such rejection has been obviated by the cancellation of claims 1 - 3 and 8 and the submission of new claims 9 - 11. Applicants submit that such claims are in compliance with 35 USC 112, second paragraph.

As to the rejection of claims 1 - 2 and 8 under 35 USC 103(a) as being unpatentable over Otsubo et al (Japanese Patent Publication 11-260596) in view of Sato et al (US 5,907,221) and Gesche et al (US 5,140,223) and the rejection of claim 3 under 35 USC 103(a) as being unpatentable over Otsubo et al in view of Sato et al and Gesche et al and further in view of Tobe et al (US 5,891,349), applicants submit that such rejections have been obviated by the cancellation of claims 1 - 3 and 8 and the submission of new claims 9 - 11. Insofar as such rejections are considered to be applicable to the newly submitted claims, such rejections are traversed and reconsideration and withdrawal of the rejections are respectfully requested.

As to the requirements to support a rejection under 35 USC 103, As to the requirements to support a rejection under 35 USC 103, reference is made to the decision of In re Fine, 5 USPQ 2d 1596 (Fed. Cir. 1988), wherein the court pointed out that the PTO has the burden under '103 to establish a prima facie case of

obviousness and can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references. As noted by the court, whether a particular combination might be "obvious to try" is not a legitimate test of patentability and obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination. As further noted by the court, one cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.

Furthermore, such requirements have been clarified in the decision of In re Lee, 61 USPQ 2d 1430 (Fed. Cir. 2002) wherein the court in reversing an obviousness rejection indicated that deficiencies of the cited references cannot be remedied with conclusions about what is "basic knowledge" or "common knowledge".

The court pointed out:

The Examiner's conclusory statements that "the demonstration mode is just a programmable feature which can be used in many different device[s] for providing automatic introduction by adding the proper programming software" and that "another motivation would be that the automatic demonstration mode is user friendly and it functions as a tutorial" do not adequately address the issue of motivation to combine. This factual question of motivation is immaterial to patentability, and could not be resolved on subjected belief and unknown authority. It is improper, in determining whether a person of ordinary skill would have been led to this combination of references, simply to "[use] that which the inventor taught against its teacher."... Thus, the Board must not only assure that the requisite findings are made, based on evidence of record, but must also explain the reasoning by which the findings are deemed to support the agency's conclusion. (emphasis added)

Irrespective of the Examiner's contentions concerning Otsubo et al, applicants submit that the Examiner recognizes that "Otsubo et al fails to teach a single

commonly shared high-frequency power supply means". Additionally, irrespective of the Examiner's contentions concerning Otsubo et al, applicants submit that this reference fails to disclose a control unit which includes (a) a distribution controlling unit for controlling distribution of electromagnetic wave radiation during plasma processing so as to enable control of plasma distribution as a convex/concave distribution by controlling the electromagnetic wave radiation; (b) a setting unit for setting processing conditions of the substrate; and (c) a monitor unit for monitoring the progress of plasma processing in the plasma process chamber, whereby the control unit controls the distribution of electromagnetic wave radiation during plasma processing of the substrate, as recited in independent claim 9, for example.

Furthermore, applicants submit that with respect to the features of independent claim 10, in addition to the recognized deficiency of Otsubo et al concerning a single commonly shared high-frequency power supply device, applicants submit that Otsubo et al does not disclose or teach such a single commonly shared high-frequency device which also maintains the stage electrode separated from ground, nor a control unit (a) for controlling the high-frequency power, (b) for maintaining the facing plate type electrode separate from ground, and (c) for enabling the setting of an impedance between the mutually isolated conductors and ground independently during processing of the substrate, as recited in independent claim 10, nor that the control unit enables control of the setting of the impedance in dependence on changes of plasma processing state of the substrate, as recited in dependent claim 11. As such, applicants submit that in addition to the features recognized by the Examiner, which are recited in claims 9 - 11, as not being disclosed by Otsubo et al, Otsubo et al is also deficient with respect to the other features as indicated above.

Thus, applicants submit that all claims patentably distinguish over Otsubo et al in the sense of 35 USC 103.

As to the combination of Otsubo et al with Sato et al and Gesche et al, irrespective of the Examiner's contentions concerning such cited art, the Examiner recognizes that the combination of Otsubo et al in view of Sato et al "fails to teach a means to store and a distribution controller to control plasma distribution". Furthermore, there is no disclosure in this combination of a control unit which includes (a) a distribution control unit operating so as to control plasma distribution as a convex/concave distribution by controlling the electromagnetic wave radiation, (b) a setting unit for setting processing conditions of the substrate, and (c) a monitor unit for monitoring the progress of plasma processing in the plasma process chamber, whereby the control unit controls the distribution of electromagnetic wave radiation during plasma processing of the substrate, as recited in independent claim 9. Additionally, it is apparent that this combination also fails to disclose a control unit which (a) controls the high-frequency power, (b) maintains the facing plate type electrodes separated from ground, and (c) enables setting of an impedance between the mutually isolated conductors and ground independently during processing of the substrate, which control unit enables control of the setting of the impedance in dependence on changes of plasma processing state of the substrate, as recited in independent claim 10 and dependent claim 11. As such, applicants submit that the proposed combination of Otsubo et al and Sato et al fail to provide the claimed features as set forth in claims 9 - 11 of this application and all claims patentably distinguish thereover.

As to the further combination of the aforementioned cited art with Gesche et al, irrespective of the Examiner's contentions concerning Gesche et al, it is again

noted that Gesche et al was available to Otsubo et al and Sato et al prior to the inventions thereof and it is apparent that such disclosure of adjusting the impedance of a plasma section was not adopted thereby. Even assuming arguendo, that such combination could be made, which, applicants submit is a hindsight reconstruction attempt, it is noted that Gesche et al does not disclose or teach a plasma generating unit, as claimed with a single commonly shared high-frequency power supply device operating in the manner defined nor a control unit, as claimed, which controls plasma distribution as a convex/concave distribution, sets processing conditions of the substrate and a monitor unit as recited in independent claim 9, or a control unit which controls the high-frequency power, maintains the facing plate type electrode separated from ground, and enables setting of an impedance between the mutually isolated conductors and ground independently during processing of the substrate, and which control unit enables control of the setting of the impedance in dependence on changes of plasma processing state of the substrate in the manner recited in independent claim 10 and dependent 11, such that applicants submit that all claims patentably distinguish over this proposed combination of references in the sense of 35 USC 103 and should be considered allowable thereover.

As to the addition of Tobe et al to the aforementioned combination of references, it is readily apparent that Tobe et al does not disclose or teach a capacitatively coupled generating device, an electromagnetic wave radiation plasma generating device and a single commonly shared high-frequency power supply device nor a control unit having the features as recited in the independent and dependent claims of this application. Thus, the Examiner has further engaged in a hindsight reconstruction attempt and applicants submit that Tobe et al does not

overcome the aforementioned deficiencies in the sense of 35 USC 103 and all claims should be considered allowable thereover.

In view of the above amendments and remarks, applicants submit that all claims patentably distinguish over the cited art and should now be in condition for allowance. Accordingly, issuance of an action of favorable nature is courteously solicited.

To the extent necessary, applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in the fees due in connection with the filing of this paper, including extension of time fees, to the deposit account of Antonelli, Terry, Stout & Kraus, LLP, Deposit Account No. 01-2135 (Case: 39737X00), and please credit any excess fees to such deposit account.

Respectfully submitted,

ANTONELLI, TERRY, STOUT & KRAUS, LLP



Melvin Kraus
Registration No. 22,466

MK/jla
(703) 312-6600